WIRELESS COMMUNICATION STRUCTURES AND METHODS WITH ENHANCED RANGE AND PERFORMANCE

ABSTRACT OF THE DISCLOSURE

Wireless communication structures and methods are provided that enhance range and performance via managed access to a wireless communication medium between system clients. The access is configured to maintain the low equipment costs and widespread equipment availability of standards-based communication systems. In particular, the structures include at least one antenna, a processor that spatially processes receive signals from the antenna, a media access controller that compares the age of receive location information with a predetermined time coherence, a location-information transformer that transforms the receive location information into transmit location information, and a transmit spatial processor configured to provide a transmit signal to the antenna that is spatially processed in accordance with the transmit location information if said age is less than the time coherence and spatially processed in accordance with predetermined location information if the age exceeds the time coherence. A database is preferably provided for storage of the receive location information and the age.